

(原 著)

高周波容量式の毛髪水分迅速 測定機器の開発とその応用

笹井喬司*, 新宅栄治*, 戸張真臣*, 永山升三*

The Development of Instrument of High-Frequency-Capacitance to Measure Rapidly the Moisture Content in Human Hair and its Application

Kyoji SASAI*, Eiji SHINTAKU*, Maomi TOBARI*
Masuzo NAGAYAMA*

Abstract

The new method to measure the moisture content of human hair was developed to obtain desirable means for hair care.

The volume of electrostatic capacity changes in proportion to moisture content of a sample when high-frequency electric current flows in condenser which is composed of a pair of electrodes and the sample, and its changes can be detected by Frequency-Voltage-Converting-Circuit.

This new method based on the above-mentioned findings is able to measure the moisture content of human hair, quickly, easily and with high accuracy without destroying the sample.

The observed behavior of moisture content of human hair during the heat-drying process, by using this moisture meter, showed that the moisture content of hair damaged by treatment with the aqueous solution of H_2O_2 and NH_4OH or brushing is lower than virgin hair.